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SANITARY PRECAUTIONS IN MEASLES.

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(Read before the Philadelphia County Homœopathic Medical Society.)

SANITARY precautions in measles are rarely, if ever, observed. This statement applies to the profession as well as to the laity; and even our Board of Health, so far as I can learn, has taken no other cognizance of this highly contagious disease than to note, perhaps, that the number of deaths from measles during the last three months has been unprecedentedly large. Mr. George E. Chambers, Registrar of the Health Office, has kindly furnished me with tables, a reference to which shows that for the three months, beginning February 1st and ending May 1st, the deaths from measles exceeded those from scarlatina and small-pox combined. I append the figures, viz.:

Measles: Adults, 3; Minors, 84.	Total,	87
Scarlatina: " 1; " 55.	" 56	} Combined total, . 84
Small-pox: " 7; " 21.	" 28	

What ratio the deaths bear to recovery is not ascertainable, as in measles no returns of non-fatal cases are required by the Philadelphia authorities. This much is certain, however, that the cases of measles during the last few months have been quite virulent; and this has been the case not only in this city, but in other places, notably so in Brooklyn. Measles is not, as it is commonly held to be, a trivial disease. True, some epidemics of measles, as well as of scarlatina and variola, are quite mild and the deaths few; but it must be borne in mind, that like the other eruptive diseases named, measles has at times proved very fatal.

In our own city there were 248 fatal cases in 1835, and 221 fatal cases in 1866; but if the mortality during the balance of the year 1880 should be proportionate to the deaths since January 1st, the number will be much in excess of the totals of the years above mentioned.

According to Woodward, out of 21,676 cases of measles in the American army, over 2.5 per cent. perished merely from the fever, without reckoning the numerous complications. The greatest fatality, however, has been observed in other countries. Thus, in 1749-50 there died on the river Amazon, according to D'Alves, 30,000 Indians, and a similar excessive mortality occurred in British North America.

At Madagascar, in 1806, 5000 cases died in one month. According to Seidl, in the district of Zolkiew, in 1840, almost 13 per cent. proved fatal. The mortality in many other places in various epidemics has reached fully 10 per cent.

In the Children's Hospital at Stockholm, of 131 cases, 36 per cent. died. At the Children's Hospital in Würzburg, in the epidemic of 1863, 10.5 per cent. died. In the Vienna Children's Hospital the deaths in 1864-1867 were 98 out of 372 cases. Watson writes that, at the London Foundling Hospital, 1 in 10 died in one year, and in another year 1 in 3. According to statistics extending over eleven years, of 1000 deaths in London, 27 are due to measles.

We thus see that the mortality in some epidemics has been large; and the experience of the past few months leads us to the conviction that it may prove larger in this country during the next few years than it has been in the past. I believe the mortality has been larger really than the records at the Health Office show. Even physicians participate in the common belief that measles is a mild disease; and when a death does occur in their practice it is returned as due to some one of the various complications, viz., meningitis, hydrocephalus, convulsions, congestion of the brain, congestion of the lungs, bronchitis, pneumonia, croup, diphtheria, or dysentery. True, any one of these complications may have been the immediate cause of death, but the remote cause was measles.

In this connection it may be well to remind you that, leaving out of the question such complications or sequelæ as catarrhal ophthalmia, otorrhœa, and lymphangitis in strumous patients, it is not uncommon for children, apparently recovered from measles, or convalescent, to be seized anew with difficult respiration, and after a longer or shorter duration of the new disturbance to even die; sometimes of cheesy pneumonia, with or without tubercles; sometimes from general miliary tuberculosis, or tubercular meningitis, the causes of which, as it appears, must be especially sought for in the cheesy degeneration of the swellings of the lymphatic glands occurring in the course of the disease (Thomas).

Among the many dangerous complications, pneumonia is the most frequent, and appears, like capillary bronchitis, especially in and just after the eruptive stage. The fact that it *often* develops *in* the eruptive stage, and that, with the exacerbation of the fever, the intensity of the eruption at first increases, may justify us in considering the pneumonia, in some epidemics at least, as a stage of measles, rather than a complication.

Croup sometimes supervenes and cuts off young patients. It tends to be of the asthenic type, and is not unfrequently preceded by diphtheritic inflammation of the fauces, which gradually passes down to the larynx (Aitken).

As will be seen further on, the physicians of Brooklyn have repeatedly seen measles followed by diphtheria, some of the cases proving fatal. Severe chronic intestinal diseases, such as entero-colitis, with wearisome diarrhoea, intestinal ulcers and stenoses, etc., may result from affections of the small and large intestines in measles. It is a very common experience that, after epidemics of measles, the children who have been affected are more prone to all sorts of attacks than at other times, and, among the severe acute diseases, croupous pneumonia has frequently made its appearance for a period of several months after the conclusion of the epidemic, especially in winter and spring (Thomas).

During the present epidemic in our own city, several cases have been observed among my homœopathic and allopathic friends, exhibiting grave typhoid conditions, and in one case heart-clot was the immediate cause of death.

The literature of the subject, so far as quoted, gives us sufficient grounds to class measles among the graver affections. If time permitted we might quote largely to show, (1) that it is one of the most virulently contagious of diseases, and that its contagiousness is fully developed at a very early stage of the disease (Bristow); (2) that persons contract the disease from the miasm adherent to the clothes of those who have recently visited rubeolous patients (Flint), or from clothes sent home in boxes from schools where the disease has raged, and that no person can remain in the same room, or even in the same house, with an infected person without hazard of taking the disease (Aitken); (3) that one attack does not render a person non-susceptible to subsequent attacks.

With this array of evidence before us, is it too much to ask that we use the same sanitary precautions in measles that we do in other contagious maladies? The physician of the present

day should not content himself with curing disease ; his mission is also to prevent it ! It therefore behooves us to combat the following prevalent notions concerning measles :

1. That every child must have measles at some period of its life.

2. That the younger the child the milder the attack will be, and hence, the sooner one has it the better.

3. That one attack protects from a second.

4. That attempts to isolate patients are useless.

5. That disinfection of clothing, bedding, etc., is unnecessary, as the disease can only be conveyed by a sick person.

As before remarked, Brooklyn, N. Y., has suffered greatly with measles, and from an article prepared by J. H. Raymond, M.D., Sanitary Superintendent, I glean much useful information ; and, in respect to the prevailing idea, that measles is a trivial disease, he pithily says : " From practical local observation and careful investigation of the subject, together with the experience of Brooklyn physicians obtained from their answers to a series of questions sent them by the Board of Health, . . . we believe that the general impressions . . . are entirely erroneous, and, if permitted to go uncontradicted, liable to do great harm and injury even to the degree of sacrificing human life."

It is interesting to note that since January 1st, 1880, in Brooklyn, of 1864 cases of measles reported to the Health Department of that city, 82 cases proved fatal, while during the same time the deaths from scarlet fever numbered only 65.

The questions submitted to the physicians of Brooklyn by the Health Department, and the answers received thereto, I herewith append. 155 responses were received and analyzed.

a. Is measles, in your opinion, highly contagious ?

139 answer, Yes. 15 answer, No. 1 answers, Moderately.

b. Is it, in your opinion, more or less contagious than scarlet fever ?

60 answer, More. 46 answer, Less. 45 answer, Equally.

c. Is it, in your opinion, conveyed by *fomites* ?

88 answer, Yes. 36 answer, No. 20 are undecided.

d. Is measles, at the present time, in your practice unusually malignant ?

14 answer, Yes. 124 answer, No. 12 answer, Severe.

e. How many cases have you had in which diphtheria has supervened upon measles ?

54 cases are reported.

f. In how many instances, *under your own observation*, has

measles attacked the same person more than once? or more than twice? and at what intervals?

210 second attacks are reported, and 7 third attacks. The intervals vary between two weeks and twenty-eight years, the usual interval being about three years.

g. Have these recurrences been severe, or have prior attacks apparently modified them?

36 answer, More severe. 130 answer, No modification. 30 answer, Attacks modified.

In view of the facts elicited by these queries, the Brooklyn Board of Health has included measles in the same category with scarlet fever and diphtheria, and requires the following action:

1. Reports to be made to the Health Office by physicians, of all cases coming under their care.

2. The exclusion of the sick and of others residing in the same house from the schools of the city, both public and private, until a permit for their return is obtained from the Board of Health.

3. These permits to be given when the patient is no longer in condition to spread the disease, and when the rooms, clothing, and other infected materials have been properly fumigated.

4. The fumigation prescribed by the Board of Health is by the burning, for five hours, of sulphur, one pound to each thousand cubic feet of space to be fumigated, the apartment being tightly closed.

5. Certificates of physicians that these requirements have been fulfilled will be sufficient evidence, and on their presentation to a sanitary inspector, or at the office of the Board of Health, the school permit will be at once issued.

Pending whatever action our own Board of Health may take, it seems to the writer that our duty is plain. Let us report every case to the health officer, and use the same sanitary precautions, as far as they apply, in measles, that we do in other forms of contagious disease.





